CLAIMS :

1. A sample chamber comprising: a main body; a table disposed in the main body which is provided with a recessed portion for mounting a sample and a groove portion surrounding the recessed portion; a stage which holds the table and is displaceable together with the table; a cover which covers above the main body including the table; and a pipe which communicates with the groove portion and evacuates a gas between a bottom face of said cover and a top face of said table.

2. A sample chamber according to claim 1, further comprising a pressure gauge which permits measurement of pressure in a region surrounded by the cover, the table and a passage of charged particle beams to be irradiated onto the sample.

3. A sample chamber according to claim 2, wherein said cover is provided with an open and close cover which opens and closes the passage of the charged particle beams.

4. A sample chamber according to claim 3, further comprising a means which evacuates a region surrounded by the cover, the table, the passage of the charged

particle beams and the open and close cover, measures pressure therein with the pressure gauge and operates the open and close cover after the measured pressure reaches at a same level as in a passage other than the region of the charged particle beams.

5. A sample chamber according to claim 1, wherein said table includes a sample up and down moving mechanism which is used when transporting the sample.

6. A sample chamber according to claim 1, wherein the height of the upper face at the outer circumferential side from the groove portion of the table is higher than the upper face thereof at the inner circumferential side from the groove portion.

7. An evacuation device comprising: a table which is provided with a recessed portion for mounting a sample and a groove portion surrounding the recessed portion; a stage which holds the table and is displaceable together with the table; a member which covers above the table; and a pipe which communicates with the groove portion and evacuates a gas between a bottom face of said member and a top face of said table.

8. An evacuation device according to claim 7, further comprising a pressure gauge which permits measurement

of pressure in a region surrounded by the member, the table and a passage of charged particle beams to be irradiated onto the sample.

9. An evacuation device according to claim 8, wherein said member is provided with an open and close cover which opens and closes the passage of the charged particle beams to be irradiated onto the sample.

10. An evacuation device according to claim 9, wherein the distance between the recessed portion and the groove portion on the table is selected more than the radius of a passage hole for the charged particle beams provided at a bottom face of the open and close cover.

11. An evacuation device according to claim 9, wherein the pressure gauge is provided at the open and close cover.

12. An evacuation device according to claim 9, further comprising a means which evacuates a region surrounded by the member, the table, the passage of the charged particle beams and the open and close cover, measures pressure therein with the pressure gauge and operates the open and close cover after the measured pressure reaches at a same level as in a passage other than the

region of the charged particle beams.

13. An evacuation device according to claim 7, wherein said table includes a sample up and down moving mechanism which is used when transporting the sample.

14. An evacuation device according to claim 7, further comprising an air pad which evacuates gas is provided on the upper face of the table at the outer circumferential side from the groove portion.

15. An evacuation device according to claim 14, wherein the height of an upper face of said air pad is lower than the upper face of said table between the groove portion and the air pad.

16. An evacuation device according to claim 14, wherein the height of the upper face of said air pad is higher than the upper face of the table at the outer circumferential side from the air pad.

17. An evacuation device according to claim 14, wherein a gas lubrication is performed between the upper face of said air pad and the bottom face of said member and said table is slidably moved by making use of the bottom face of the member as a guide face.

18. A circuit pattern forming apparatus which comprises a column for irradiating charged particle beams onto a sample and a sample chamber in which the sample is placed and which evacuates gas around the placed sample to keep vacuum therein and wherein under the condition kept in vacuum the charged particle beams are irradiated onto the upper face of the placed sample to form a circuit pattern on the upper face of the sample characterized, in that the sample chamber comprises a main body; a table disposed in the main body which is provided with a recessed portion for mounting the sample and a groove portion surrounding the recessed portion; a stage which holds the table and is displaceable together with the table; a cover which covers above the main body including the table; and a pipe which communicates with the groove portion and evacuates a gas between a bottom face of said cover and a top face of said table including the sample.

19. A circuit pattern inspection apparatus which comprises a column for irradiating charged particle beams onto a sample on which a circuit pattern is formed and a sample chamber in which the sample is placed and which evacuates gas around the placed sample to keep vacuum therein and wherein under the condition kept in vacuum the charged particle beams

are irradiated onto the upper face of the placed sample to inspect the circuit pattern on the upper face of the sample characterized, in that the sample chamber comprises a main body; a table disposed in the main body which is provided with a recessed portion for mounting the sample and a groove portion surrounding the recessed portion; a stage which holds the table and is displaceable together with the table; a cover which covers above the main body including the table; and a pipe which communicates with the groove portion and evacuates a gas between the bottom face of said cover and a top face of said table including the sample.

20. An evacuation device comprising: a table for supporting a sample, said table having a evacuation portion; a movable stage for holding said table; and a pipe which communicates said evacuation portion, for evacuating a gas between a top surface of said table and a surface facing the top surface of said table.

21. A sample chamber comprising: a main body; and an evacuation device according to claim 20, which is provided in said main body.

22. An exposure apparatus comprising: a sample chamber according to claim 21; and a system for irradiating

exposure beams onto a sample in said sample chamber.

23. An inspection apparatus comprising: a sample chamber according to claim 21; and a system for irradiating inspection beams onto a sample in said sample chamber.

24. A sample chamber according to claim 1, wherein said stage is displaceable in front and back, right and left and up and down.

25. An evacuation device according to claim 7, wherein said stage is displaceable in front and back, right and left and up and down.

26. A circuit pattern forming apparatus according to claim 18, wherein said stage is displaceable in front and back, right and left and up and down.

27. A circuit pattern inspection apparatus according to claim 19, wherein said stage is displaceable in front and back, right and left and up and down.